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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,749	06/12/2000	Brian H. Silver	5297/132	4383

7590 03/29/2006

Baniak Pine & Gannon
150 N Wacker Drive
Suite 12000
Chicago, IL 60606

EXAMINER

MENDEZ, MANUEL A

ART UNIT

PAPER NUMBER

3763

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,749

Applicant(s)

SILVER ET AL.

Examiner

Manuel Mendez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-39 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, drawn to a flexible diaphragm, a rigid member, an air seal formed between said diaphragm and said rigid member, a puller member attached to said flexible diaphragm, a drive member connected to said puller member which drive member is adapted to draw said puller member along with said diaphragm away from said rigid member, thereby creating a space between said diaphragm and said rigid member and forming a pressure region within said space, a motor drive mechanism including said drive member to reciprocate said puller member to first draw said puller member away from said rigid member and then move said puller member back toward said rigid member, an outlet in communication with said space between said diaphragm and said rigid member, and a vacuum regulator device on said rigid member for adjusting the level of negative pressure within said pressure region when said diaphragm is moved away from said rigid member, classified in class 604, subclass 65.
- II. Claim 5, drawn to a flexible diaphragm, a rigid member, an air seal formed between said diaphragm and said rigid member, a puller member attached to one of said flexible diaphragm and said rigid member, a drive member

connected to said puller member which drive member is adapted to draw said puller member along with one of said diaphragm and said rigid member from the other of said diaphragm and rigid member thereby creating a space between said diaphragm, classified in class 604, subclass 66.

- III. Claims 6, drawn to a first member, a second member movable relative to said first member, an air seal formed between said first and second members, a puller member attached to said first member, a drive member connected to said puller member which drive member is adapted to draw said puller member along with said first member away from said second member, thereby creating a space between said first and second members and forming a pressure region within said space, a motor drive mechanism including said drive member to reciprocate said puller member to first draw said puller member away from said second member and then move said puller member back toward said second member, an outlet in communication with said space between said first and second members, and a vacuum regulator device on one of said first and second members for adjusting the level of negative pressure within said pressure region, classified in class 604, subclass 67.

- IV. Claims 7, drawn to a base in communication with a volume which is subject to a source of vacuum; a rotary disk member mounted upon said base; said base having at least one hole formed therein which extends

into said volume; said rotary disk member overlying said base and having an aperture therethrough which is alignable with said at least one hole, classified in class 604, subclass 74.

- V. Claims 8-9, drawn to first and second motor driven pumps each generating a negative pressure, with an outlet on each pump communicating with said negative pressure; first and second breast shield assemblies including tubing for connection to a respective pump; and a vacuum regulator associated with a respective pump, whereby the negative pressure generated by each said pump is independently regulatable, classified in class 604, subclass 76.
- VI. Claims 10-11, drawn to a flexible diaphragm, a stationary cap member surrounding said flexible diaphragm, an air seal formed between said diaphragm and said cap member, a puller attached to said flexible diaphragm, a follower connected to said puller member which follower is adapted to draw said puller member along with said diaphragm away from said cap member, thereby creating a space between said diaphragm and said rigid member and forming a negative pressure region within said space, a motor drive mechanism including a cam member mounted to turn with a drive shaft with said follower mounted off-center on said cam member and off-axis to said drive shaft said cam member when rotated by said drive shaft causing said follower to reciprocate said puller member to first draw said puller member away from said cap member and then move

said puller member back toward said cap member, and an outlet in communication with said space between said diaphragm and said cap member which outlet is used to convey a pressure generated in said space, such as said negative pressure, to a breast shield assembly for use in extracting mother's milk, classified in class 604, subclass 75.

- VII. Claim 12-17, drawn to a flexible diaphragm having a front side and a back side, a stationary cap member surrounding said flexible diaphragm front side, an air seal formed between said diaphragm and said cap member, a puller attached to said flexible diaphragm, a follower pivotably connected to said puller member which follower is adapted to draw said puller member along with said diaphragm, away from said cap member, thereby creating a space between said diaphragm and said rigid member and forming a negative pressure region within said space, a motor drive mechanism including a cam member mounted to rotate with a drive shaft with said follower movably mounted off-center on said cam member and off-axis to said drive shaft, said cam member when rotated by said drive shaft causing said follower to reciprocate said puller member to first draw said puller member away from said cap member and then move said puller member back toward said cap member, a puller guide having a channel formed therein, and a guide member which extends into said guide channel for constrained relative movement within said channel as said puller member reciprocates, said puller, puller guide and guide

member cooperating together to maintain said puller moving along an axis generally perpendicular to said diaphragm, and an outlet in communication with said space between said diaphragm and said cap member which outlet is used to convey a pressure generated in said space to a workpiece, classified in class 604, subclass 346.

- II. IX. Claims 18-21, drawn to a motor drive having a drive shaft output an eccentric mounted to be rotated by said drive shaft output; a first and a second puller; a first and a second expansible chamber, each said expansible chamber having a flexible diaphragm which is movable relative to a base member and is generally air sealed with respect to said base member so as to form a variable volume with said base member by movement of said diaphragm, each said diaphragm having a front side and a back side; an outlet in communication with a variable volume of a respective chamber; said first puller being connected to said first expansible chamber to move its flexible diaphragm relative to a respective base member, and said second puller being connected to said second expansible chamber to move its flexible diaphragm relative to a respective base member, said first and second pullers being connected to be moved by said eccentric in a push-pull arrangement, whereby as said eccentric is rotated one expansible chamber as a decreasing volume and the other expansible chamber has all increasing volume, classified in class 604, subclass 313.

- IX. Claim 22, drawn to a motor drive, a first and a second puller;
a mechanism connecting said first and second puller to said motor drive;
a first and a second expansible chamber, each said expansible chamber having a first member which is movable relative to a base member and is generally air sealed with respect to said base member so as to form a variable volume with said base member by movement of said first member, a first outlet in communication with the variable volume of said first chamber and a second outlet in communication with the variable volume of said second chamber; said first puller being connected to said first expansible chamber to move its first member relative to a respective base member, and said second puller being connected to said second expansible chamber to move its first member relative to a respective base member, said first and second pullers being connected to be moved in a push-pull arrangement by said mechanism, whereby as said motor is operated one expansible chamber has a decreasing volume and the other expansible chamber has an increasing volume, classified in class 604, subclass 315.
- X. Claims 23-25, drawn to a motor drive; a first and a second expansible chamber, each said expansible chamber having an element which is movable relative to a base member with said element and base member being generally air sealed with respect to each other so as to form a variable volume between them by movement of said element relative to

said base member, with an outlet in communication with a respective variable volume; and a drive train being connected to said motor drive and to said first and second expansible chambers to move each expansible chamber element relative to a respective base member, classified in class 604, subclass 33.

- XI. Claims 26-28, drawn to a motor drive; a first and a second expansible chamber, each said expansible chamber having an element which is movable relative to a base member with said element and base member being generally air sealed with respect to each other so as to form a variable volume between them by movement of said element relative to said base member; a first outlet in communication with the variable volume of said first chamber and a second outlet in communication with the variable volume of said second chamber; a drive train connected to said motor drive and to said first and second expansible chambers to move each expansible chamber element relative to a respective base member, and a housing for said motor drive, expansible chambers and drive train, said housing, said motor drive, said first and second chambers and said drive chain being arranged in a hand-held unit, classified in class 604, subclass 120.

- XII. Claims 29-31, drawn to a motor drive; a first and a second expansible chamber, each said expansible chamber having an element which is movable relative to a base member with said element and base member

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being generally air sealed with respect to each other so as to form a variable volume between them by movement of said element relative to said base member, an outlet for each variable volume of a respective chamber; a drive train connected to said motor drive and to said first and second expansible chambers to move each expansible chamber element relative to a respective base member, and a housing having each said base member integrally formed therein, said housing farther containing said motor drive, expansible chambers and drive train, classified in class 604, subclass 121.

XIII. Claims 32-33, drawn to first and second housing parts which assemble to provide an interior space for containing pump mechanism components, and a noise and vibration reducing material formed integral with said housing parts adjacent said interior space, classified in class 604, subclass 30.

XIV. Claims 34-39, drawn to first and second housing parts which assemble to provide an interior space adapted to contain pump mechanism components, and a flexible diaphragm formed integral with each housing part, classified in class 604, subclass 31.

The inventions are distinct, each from the other because of the following reasons:

Inventions I to XIV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, Groups I to XIV have separate

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utility in view of structural differences disclosed in each one of the Groups above. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

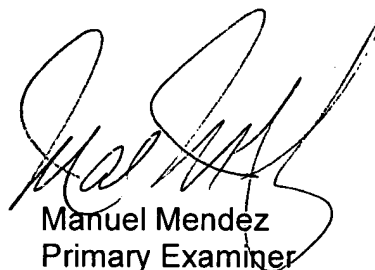
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel Mendez whose telephone number is 703-272-4977. The examiner can normally be reached on 0730-1800 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nicholas D. Lucchesi can be reached on 571-272-4977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Manuel Mendez
Primary Examiner
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